

REMARKS

Claims 17-23 are all of the claims currently pending in this application. Claim 23 is added via this Amendment.

Foreign Priority and IDS:

Applicants thank the Examiner for acknowledging their claim for priority and receipt of the priority documents in Application No. 08/877,518. Applicants also thank the Examiner for considering the references submitted with the Information Disclosure Statement filed on March 16, 2001.

35 U.S.C. §102:

The Examiner rejects claims 17, 18 and 21 under 35 U.S.C. §102(b) as being anticipated by Brande (U.S. Pat. No. 4,795,172). Applicants respectfully traverse this rejection in view of the following remarks.

Applicants submit that rejections under 35 U.S.C. §102 are proper only when each element of the claimed subject matter is disclosed in the cited reference. Brande fails to teach or suggest each element of the claimed subject matter. Claim 17 is directed to a novel combination of elements that form a new and unobvious feed screw device. The features of claim 17 are neither disclosed nor rendered obvious by Brande. For example, and not by limitation, Brande does not disclose a lubricant supply device having a portion that contacts

an outer peripheral surface of a screw shaft and which comprises a material that includes a lubricant.

The Examiner compares the seal 55 of Brande to the claimed lubricant supply device. However, the seal 55 of Brande does not disclose the claimed lubricant supply device and actually teaches away from the features of claim 17. This is because Brande teaches that each of the seals 55 prevents grease, which is introduced into the interior of a flanged ball nut 14 and a trailing ball nut 15, from escaping along helical grooves 17 and 18 of a screw 11, by a continuous wiping and sealing action. (See col. 5, lines 43-47.) Thus, because Brande discloses the seal 55 as providing a barrier so that grease is restricted to an interior of the ball nut 14, one skilled in the art would not have been taught to provide a seal comprising a material that includes a lubricant, at an outer peripheral surface of the screw. Thus, Brande does not disclose each element of the claimed subject matter.

Consequently, claim 17 cannot be anticipated by Brande, and the rejection of claim 17 under 35 U.S.C. §102(b) should be withdrawn.

Dependent claims 18 and 21 also are not anticipated by Brande, at least by virtue of their dependency on independent claim 17, in addition to their individual recitations.

35 U.S.C. §103 - claims 19 and 22:

The Examiner rejects claims 19 and 22 under 35 U.S.C. §103(a) as being unpatentable over Brande in view of Wysong (U.S. Pat. No. 3,669,460).

In making the rejection under 35 U.S.C. §103(a), the Examiner again relies on Brande for the teaching of a seal 55 and additionally relies on Wysong for the disclosure of a sealing member 20; however, the seal member of Wysong fails to make up for the deficient teachings of Brande. Specifically, the seal member of Wysong is not taught or suggested as having a material including a lubricant, such that the material contacts an outer peripheral surface of a screw shaft, nor is such a feature obvious in light of Wysong. Further, the deficient teachings of Brande are not obvious in light of Wysong.

Consequently, claims 19 and 22 are patentable over Brande in view of Wysong, and the rejection of claims 19 and 22 under 35 U.S.C. §103(a) should be withdrawn.

35 U.S.C. §103 - claim 20:

The Examiner rejects claim 20 under 35 U.S.C. §103(a) as being unpatentable over Brande in view of Tsukada et al. (U.S. Pat. No. 5,769,543 [hereinafter "Tsukada"]).

Applicants submit that claim 20 is patentable over Brande in view of Tsukada because of the failure of Tsukada to make obvious, the deficient teachings of Brande. Specifically, one skilled in the art would not have been taught to provide a seal comprising a material that includes a lubricant, at an outer peripheral surface of the screw in Brande, in light of Tsukada. As stated above, Brande teaches to seal in the grease material, thus, teaching away from using a seal that comprises a material that includes a lubricant. Further, the Examiner relies on Tsukada for the teaching of "lip parts." However, Brande actually discloses that "a lip seal is not satisfactory when operating at high temperatures with grease."

(See col. 1, lines 49-50). Thus, Applicants submit that Tsukada fails to properly make up for the deficient teaches of Brande. Consequently, claim 20 is patentable over Brande in view of Tsukada and the rejection of claim 20 under 35 U.S.C. §103(a) should be withdrawn.

New Claim 23:

Applicants add new claim 23 to obtain more varied protection for the invention, and submit that it is patentable over the applied references at least by virtue of its dependency on independent claim 17, in addition to its individual recitations.


In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the local telephone number listed below.

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. APPLICATION NO. 09/809,262

ATTORNEY DOCKET NO. Q63051
ART UNIT: 3682

Applicants hereby petition for any extension of time that may be required to maintain the pendency of this case, and any required fee (except for the Issue Fee) may be charged to our Deposit Account No. 19-4880.

Respectfully submitted,



Daniel V. Williams
Registration No. 45,221

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Date: March 22, 2002

APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

17. (Amended) A feed screw device comprising:

a screw shaft;

a nut member threadably engaging an outer periphery of the screw shaft;

a lubricant supply device having an insertion hole formed in an outer periphery side thereof, said lubricant supply device coming in contact with the outer peripheral surface of said screw shaft, such that a portion of said lubricant supply device which contacts the outer peripheral surface of the screw shaft comprises a material including a lubricant;

a retaining ring for retaining said lubricant supply device; and

a projection formed on said retaining ring and disposed so as to be received in the insertion hole.

New Claim 23 is added.